Claims

[c1] 1. A storage media for data, said media comprising:
a substrate;
at least one plastic film; and
at least one data layer disposed on said plastic film;
wherein said data layer can be at least partly read from, written to, or a combination thereof by at least one energy field; and
wherein said energy field comprises at least one of an electric field, a magnetic field, and an optical field.

[c2] 2.The storage media as in Claim 1, wherein said rigid substrate has a Young's modulus of at least about 7 GPa.

[c3] 3.The storage media as in Claim 2, wherein said Young's modulus is at least about 70 GPa.

[c4] 4.The storage media as in Claim 3, wherein said Young's modulus is at least about 200 GPa.

[c5] 5. The storage media as in Claim 1, wherein said substrate comprises at least one of metal, glass, ceramic, reinforced plastic, or combinations comprising at least one of the foregoing.

[c6] 6.The storage media as in Claim 1, wherein said plastic film comprises embossed surface features.

[c7] 7.The storage media as in Claim 1, wherein said plastic film comprises embossed surface features selected from the group consisting of pits, grooves, edge features, asperities, and combinations comprising at least one of the foregoing.

[c8] 8.The storage media as in Claim 1, wherein said rigid substrate comprises a glass substrate.

[c9] 9. The storage media as in Claim 1, wherein the head slap characteristics of the storage media containing the at least one plastic film is substantially equivalent

to a second storage media not containing the at least one plastic film.

[c10] 10.The storage media as in Claim 1, wherein said storage media has a data layer with a coercivity of at least about 1,500 oersted.

[c11] 11.The storage media as in Claim 1, wherein said storage media has a data layer with a coercivity of at least about 3,000 oersted.

[c12] 12.The storage media as in Claim 1, comprising at least one spin coated, spray coated, or spin and spray coated plastic film.

[c13] 13.The storage media as in Claim 1, wherein said plastic film comprises a thermoplastic resin with a glass transition temperature of at least 140 ° C.

[c14] 14.The storage media as in Claim 1, wherein said plastic film comprises at least one thermoplastic resin of the group consisting of polyetherimides, polyetheretherketones, polysulfones, polyethersulfones, polyetherethersulfones, polyphenylene ethers, thermoplastic polyimides, and polycarbonates.

[c15] 15.The storage media as in Claim 1, wherein said plastic film comprises at least one thermoset resin comprising embossed surface features.

[c16] 16. The storage media as in Claim 1, wherein said plastic film comprises at least one thermoset resin, wherein the at least one thermoset resin at least partially cured during a process to emboss surface features onto the at least one thermoset resin.

[c17] 17.The storage media as in Claim 1, wherein said plastic film comprises at least one thermoset resin selected from the group consisting of epoxy, phenolic, alkyds, polyester, polyimide, polyurethane, mineral filled silicone, bis-maleimides, cyanate esters, vinyl, and benzocyclobutene resins.

[c18] 18.The storage media as in Claim 1, wherein said thickness is about 0.82 mm to about 1.25 mm.

[c19] 19. A storage media, comprising:
a substrate having a top side and a bottom side;
at least one plastic film on each of said top side and said bottom side; and

at least one data layer disposed on at least one of said plastic film on each of said top side and said bottom side; and

wherein said data layer can be at least partly read from, written to, or a combination thereof by at least one energy field; and

wherein said energy field comprises at least one of an electric field, a magnetic field, and an optical field.

[c20] 20. A storage media for data, said media comprising:

a substrate comprising an areal density greater than about 10 Gbits/in ^{2} and an axial displacement peak of less than about 500 μ under shock excitation;

at least one plastic film comprising a surface roughness of less than about 10 Å and

at least one data layer disposed on said plastic film;

wherein said data layer can be at least partly read from, written to, or a combination thereof by at least one energy field; and

wherein said energy field comprises at least one of an electric field, a magnetic field, and an optical field.